

## REMARKS/ARGUMENTS

Reexamination and reconsideration of this application as amended is requested. By this amendment, Claims 1, 6, 8, 13, 15 and 19-20 have been amended. Claim 18 has been canceled without prejudice and new Claim 21 has been added. After this amendment, Claims 1-17, and 19-21 remain pending in this application. Applicants wish to thank the Examiner for his comments and have made amendments conforming to the Examiner's remarks.

### Claim Rejections - 35 USC § 103

(3) The Examiner rejected claims 1-20 under 35 U.S.C. § 103 as being obvious over Steele et al. (U.S. Patent Pub. No. 2003/0191737) in view of Dillon (U.S. Patent 6,351,467).

Applicants have amended independent Claims 1, 6, 8, 13, 15 and 19-20 to more clearly and distinctly recite the present invention. Specifically, amended Claims 1, 8, 13 and 15 now more clearly and distinctly recite "communicating with a website located across a network using a web protocol". Amended Claims 1 and 15 additionally recite "determining, at a location located across the network from the website, whether additional data from the web site is extractable". Amended Claims 6 and 19-20 now more clearly and distinctly recite that the converted hyperlink is sent to "a website located across a network using a web protocol". Support for these amendments is found in the original specification as filed. See for example FIGs. 1-2 and 7 and page 8, lines 1-6 and 13-15. No new matter was added by this amendment to Claims 1, 6, 8, 13, 15 and 19-20.

Regarding "web protocol", specific support for this language may be found in FIGs. 1-4 and page 8, line 1 through page 9, line 9 of the original specification as filed. Page 8, line 1 through page 9, line 9, describes among other things, how components of the present invention communicate with a web site or web site server and the result of

these communications. The language "web protocol" refers to one of the methods used for these communications. For example, on page 8, lines 19-20, illustrate one specific example of a web protocol used to communicate with the Web Site Server 104.

As an initial matter, Applicants wish to supplement their previous Declaration submission (in the last Response to Office Action) and accordingly more fully restate their Declaration under 37 C.F.R. § 1.131, and with associated supporting evidence, to establish that the invention claimed in the instant application was reduced to practice prior to the effective date (i.e., prior to December 18, 2000) of the cited Steele reference. The Applicants reduced to practice the invention disclosed and claimed in the present patent application by creating a working prototype system that demonstrated the claimed features of the present invention prior to December 18, 2000. See the attached evidence that includes several source code listings and also test results (shown via screen shots of the working prototype system) that illustrate the prototype system had extracted data from certain commercial web sites across the Internet by using features described and claimed in the present patent application, including such features as hyperlink synthesis, method conversion, the Proxy engine, and script analysis. Therefore, Applicants believe that sufficient evidence has been presented to convince the Examiner that the presently claimed invention was invented and actually reduced to practice by the applicants prior to December 18, 2000.

The Steele reference cited by the Examiner was filed in the U.S. Patent and Trademark Office on December 18, 2000, which is after the date of invention and actual reduction to practice of the invention claimed in the instant application. Accordingly, Steele is removed as an available prior-art reference and cannot be cited against the present application in a rejection under 35 U.S.C. § 103. The Dillon reference was cited as a combination with the Steele reference to add Dillon's teaching of passing URLs for dynamic pages to a crawler. Dillon teaches a conventional web crawler with the exception that it formats the URL data items into packages. See column 9, lines 52-58. Dillon clearly does not teach or suggest the claimed invention as recited for the present

independent claims, and for all dependent claims depending therefrom, respectively. Therefore, it is respectfully submitted that the rejection of Claims 1-20 under 35 U.S.C. § 103 should be withdrawn.

Notwithstanding the removal of the Steele reference as an available prior-art reference and consequently that cannot be cited against the present application, Applicants wish to further point out below some clear distinguishing features of the presently claimed invention over any cited reference that is similar to the Steele reference in view of Dillon.

The Steele reference discloses a method for generating an index of data available from a server. In Steele, each Server-Based Agent (SBA) is dedicated to a specific web server and autonomously searches for data on that specific web server. Steele, para. [0075] and FIGs. 2 and 4-5. Once configured to suit the needs of the website administrator, the SBA scrutinizes the local website and finds the database(s) used in the generation of dynamic pages. More specifically, the SBA examines form handling programs, which are local programs running on the web server, to locate a relevant database. Steele, FIG. 12, step 1204. Steele teaches that indexing information is obtained while the SBA is connected to a **database**. For example, Steele teaches that the SBA **connects to the local data base and extracts indexing information from the relevant database**, no web protocol is used. Steele, para. [0139]. The steps taken by the SBA requires direct, local database access and cannot be accomplished by communicating with a website using a web protocol. Therefore, it is apparent that the discovery and indexing as performed in Steele is done by accessing a local database and not by **communicating with a website located across a network using a web protocol**, as recited for amended Claims 1, 8, 13, and 15. A web crawler or browser or any other web client would not be able to perform steps 1204-1208 of Steel et al.

Furthermore, the “database triggers” as taught by Steele, detect changes to the databases (**where the indexing information is located**). Once a change to the database

has been detected, the indexing information is updated with the changes. Para. [0138]. This method applies exclusively to databases and **cannot be performed by communicating with a website using a web protocol**. Therefore, Steele does not disclose determining whether additional data from a web site located across a network is extractable, as recited for amended Claims 1 and 15 of the instant application.

The intent, purpose and function of Steele is the utilization of **local** databases to obtain information that is then sent and stored in a remote index database. Steele is completely silent on, inter alia, "receiving data from a web site located across a network" and "determining, at a location located across the network from the website, whether additional data from the web site is extractable", as recited for amended Claims 1 and 15. The SBA cannot meet the intent and purpose of the present invention of "creating at least one synthetic hyperlink for extracting the data from the web site [located across a network]". **In fact, the premise of the instant invention, and one significant distinction from Steele, is that since direct database access is not possible by communicating with a website that is located across a network using a web protocol, the novel crawler provides a way to gain access that was not possible with the prior art.** The limitations taken "as a whole" in amended independent Claims 1, 8, 13, and 15 are not present in Steele or Dillon, either taken alone, or in any combination of the two cited references.

Very recently, the Federal Circuit again took up the identical question of Obviousness in combining references in the case In re Sang Su Lee, No. 00-1158 (January 18, 2002). In this case Board of Patent Appeals rejected all of Applicant's pending claims as obvious under § 103. The Federal Circuit vacated and remanded. Citing two prior art references, the Board stated that a person of ordinary skill in the art would have been motivated to combine the references based on "common knowledge" and "common sense," but it did not present any specific source or evidence in the art that would have otherwise suggested the combination. Similarly, the Examiner on page 3 stated that "*Dillon discloses the purpose for this practice as allowing the crawler to*

*obtain the content from the dynamic page so as to crawl and index further should this content contain any other URLs*" without more.<sup>1</sup> The Federal Circuit held that the Board's rejection of a need for any specific hint or suggestion in the art to combine the references was both legal error and arbitrary agency action subject to being set aside by the court under the Administrative Procedure Act (APA). Accordingly, without any suggestion or motivation found in Steele in view of Dillon, the Examiner has failed to properly establish a *prima facie* case of obviousness of the claimed invention as a "whole." The Applicants submit the presently claimed invention distinguishes over Steele in view of Dillon for at least this reason as well.

For the foregoing reasons, amended Claims 1, 8, 13, and 15, distinguish over Steel et al. in view of Dillon. Claims 2-5, 9-12, 14, and 16-17 depend from amended Claims 1, 8, 13, and 15 respectively. Since dependent claims contain all the limitations of the independent claims, Claims 2-5, 9-12, 14, and 16-17 distinguish over Steele in view of Dillon as well, and the Examiner's rejection should be withdrawn. However, additional arguments regarding Claims 3-4 are given below.

The Examiner directs Applicants to paragraphs [0139] and [0190-0196], wherein Steele teaches that the SBA determines further information about each type of database such as, query language used, username and password, and access methods. Paragraphs [0139] and [0190-0196] describe how the SBA determines these "parameters". Once the "parameters" are determined, the SBA can connect to the database associated with the "parameters". In contrast, Claims 3 and 4 of the present invention recite creating a synthetic hyperlink by augmenting a hyperlink request with at least one parameter value. The at least one parameter value is determined by "executing a script contained in the data from the web site" (Claim 3 and similarly Claim 17) or by "a script filter analyzing a script contained in the data from the web site" (Claim 4).

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<sup>1</sup> If, however, the Examiner's statements are based on facts within the personal knowledge of the Examiner, the Applicant respectfully requests that the Examiner support these references by filing an affidavit as is allowed under MPEP §707 citing 37 CFR 1.104(d)(2).

Steele only describes what a script is in paragraphs [0190-0196] and **does not** teach or suggest how to analyze the script so that hyperlink parameter values may be determined. In fact, Steele only teaches how to determine connection parameters to a local database by examining form handling programs or scripts. Database connection parameters such as the query language used, username and password, and access methods are **not** the same as the at least one parameter value that is augmented with the hyperlink request as recited for Claims 3 and 4 of the present invention. Therefore, Steele does not teach or suggest the present invention as recited for Claims 3 and 4. Applicants believe that the rejection of Claims 3-4 under 35 U.S.C. 103(a) as being obvious over Steele in view of Dillon has been overcome. The Examiner should withdraw the rejection of these claims.

Claim 18 has been canceled without prejudice and therefore, Applicants believe that the rejection of Claim 18 under 35 U.S.C. 103(a) as being obvious over Steele in view of Dillon is now rendered moot. Also, new Claim 21, which clearly and distinctly recites the novelty of the present invention, depends from amended Claim 1 and, since dependent claims recite all of the limitations of the independent claim, it is believed that, therefore, new Claim 21 also recites in allowable form. However, additional remarks and arguments are given below with respect to new Claim 21 and the above cited references.

New Claim 21 recites that the web protocol in amended Claim 1 is the Hyper Text Transfer Protocol. Support for new Claim 21 may be found in the specification as originally filed, see for example page 6, lines 1-6 and 13-15; and page 8, lines 19-20. No new matter was added.

The above arguments and remarks with respect to Claims 1, 8, 13, and 15, and more specifically, "**communicating with a website located across a network using a web protocol**", are likewise applicable here in support of the allowability of new Claim 21. These applicable arguments have already been presented above and will not be

repeated here. Therefore, Applicants believe that Steele, Dillion, or a combination therefore does not teach, anticipate, or suggest the present invention as recited for new Claim 21.

In paragraph 3 on page 5 of the above-identified Office Action, claim 6 has been rejected as being obvious over Steele et al. (U.S. Patent Pub. No. 2003/0191737) in view of Dillon (U.S. Patent 6,351,467) under 35 U.S.C. § 103.

The Statute expressly requires that obviousness or non-obviousness be determined for the claimed subject matter “as a whole,” and the key to proper determination of the differences between the prior art and the present invention is giving full recognition to the invention “as a whole.” The Steele reference taken alone or in view of Dillon simply does not teach or suggest the patentably distinct limitation of:

...receiving a synthetic hyperlink request;  
**converting the synthetic hyperlink request to a method indicated by the synthetic hyperlink request** to create a converted hyperlink request; and  
sending the converted hyperlink request to a web site located across a network using a web protocol. (Emphasis added).

As noted by the Examiner on page 5 of the above-identified Office action, the Steele reference discloses, in paragraphs 0190-0196, the handling of dynamic pages by the SBA. As previously noted, the SBA, contrary to the invention of the instant application, accesses a local database to retrieve indexing information. “The SBA can either be installed on the same computer as the [HTTP server Directory Tree (HSDT)] or on a computer that allows viewing of all files that are part of the HSDT.” Steele, para. 0185. As stated in paragraph 0279 of Steele, a number of pieces of information related to the dynamic page creation point will be sent by an SBA, including the URL of the form page (fURL in FIG. 18), the URL of the form handling program (fhpURL in FIG. 18), the method of the form (GET or POST) (method in FIG. 18), the number of form input fields (fields in FIG. 18), their names (field1 field2 in FIG. 18) and the database columns they

correspond to. However, **the SBA only executes an HTTP GET request.** Steele, para 0191. Steele does not, inter alia, “[convert] the synthetic hyperlink request **to a method indicated by the synthetic hyperlink request** to create a converted hyperlink request and [send] the converted hyperlink request to a web site **located across a network using a web protocol**”, as recited for amended independent Claim 6 of the instant application.

**Steele is completely silent on how to convert between a POST and a GET method.** Steele does not explain or recognize that since most existing crawlers can only handle the GET method, synthetic hyperlinks destined for web sites using the POST must be converted to the POST method. (See page 14, lines 9-11 of the instant application). To indicate which synthetic hyperlinks require conversion, the Transcoder 500 of the present invention decides which synthetic hyperlinks require conversion, at step 806, and specially mark those hyperlinks, at step 808. (Page 14, lines 11-14 of the instant application). After the synthetic hyperlinks that require conversion are marked, the synthetic hyperlinks are combined with the data from the web site, at step 810. Generally, the synthetic hyperlinks are inserted into the HTML page from the web site. Finally, the combined data is sent back to the crawler, at step 812, for further processing. (Page 14, lines 17-18 of the instant application). The limitations taken “as a whole” in independent claim 6 are not present in Steele taken alone and/or in view of Dillon.

Additionally amend independent Claim 6 also recites sending the converted hyperlink request to a web site **using a web protocol.** As discussed above with respect to amended Claims 1, 8, 13, and 15, Steele only teaches accessing a database that is local to the web server that the SBA performs on. Nowhere does Steele teach or even suggest using a web protocol for sending a converted hyperlink request to a website using a web protocol or how using a web protocol would be compatible with Steele’s invention.

The Examiner on page 3, to support the obviousness rejection, stated that “*Dillon discloses the purpose for this practice as allowing the crawler to obtain the content from the dynamic page so as to crawl and index further should this content contain any other*

*URLs*" without more.<sup>2</sup> As has been already discussed above, the Federal Circuit has held that an Obviousness rejection based on a need for any specific hint or suggestion in the art to combine the references was both legal error and arbitrary agency action subject to being set aside by the court under the Administrative Procedure Act (APA).

Accordingly, without any suggestion or motivation for the combination that is found in Steele or Dillon, the Examiner has failed to properly establish a *prima facie* case of obviousness of the claimed invention as a "whole." The Applicants respectfully submit that the presently claimed invention as recited for Claim 6 distinguishes over Steele in view of Dillon for at least this reason as well.

For the foregoing reasons, independent Claim 6 distinguishes over Steel et al. (or a similar reference) in view of Dillon. Claim 7 depends from Claim 6. Since dependent claims contain all the limitations of the independent claims, Claim 7 distinguishes over Steele in view of Dillon as well, and the Examiner's rejection of Claim 7 should be withdrawn.

In paragraph 5, on page 6, of the above-identified Office Action, Claims 19-20 have been rejected as being obvious over Steele et al. (U.S. Patent Pub. No. 2003/0191737) in view of Dillon (U.S. Patent 6,351,467) under 35 U.S.C. § 103.

The arguments and remarks presented above with respect to amended Claim 6 are also applicable here. Moreover, the Statute expressly requires that obviousness or non-obviousness be determined for the claimed subject matter "as a whole," and the key to proper determination of the differences between the prior art and the present invention is giving full recognition to the invention "as a whole." As discussed above with regard to Claim 6 and the rejections under 35 U.S.C. § 103 (a), the prior art of record, taken alone or in combination with one another, does not teach or suggest, *inter alia*, "**converting the**

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<sup>2</sup> If, however, the Examiner's statements are based on facts within the personal knowledge of the Examiner, the Applicant respectfully requests that the Examiner support these references by filing an affidavit as is allowed under MPEP §707 citing 37 CFR 1.104(d)(2).

**synthetic hyperlink request to a method indicated by the synthetic hyperlink request to create a converted hyperlink request” and sending the converted hyperlink request to a web site located across a network using a web protocol”, as recited for Claims 19 and 20 of the instant application.** Applicants therefore respectfully submit that the rejection of Claims 19 and 20 should be withdrawn.

Accordingly, in view of the amendment and remarks above, since neither Steele, Dillon, nor any combination of the two cited references, teaches, anticipates, or suggests, the presently claimed method and system for extending the performance of a web crawler, as recited for the independent claims, and for all dependent claims depending therefrom respectively, Applicants believe that the rejection of Claims 1-20 under 35 U.S.C. 103(a) has been overcome. The Examiner should withdraw the rejection of these claims. Further, in view of the discussion above, new Claim 21 is in allowable form and Applicants kindly request that the Examiner also allow this claim to issue.

### **Conclusion**

The foregoing is submitted as full and complete response to the Official Action mailed January 10, 2005, and it is submitted that Claims 1-17 and 19-21 are in condition for allowance. Reconsideration of the rejection is requested. Allowance of Claims 1-17 and 19-21 is earnestly solicited.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicants have argued herein that such amendment was made to distinguish over a particular reference or combination of references.

Applicants acknowledge the continuing duty of candor and good faith to disclose information known to be material to the examination of this application. In accordance with 37 CFR § 1.56, all such information is dutifully made of record. The foreseeable

equivalents of any territory surrendered by amendment are limited to the territory taught by the information of record. No other territory afforded by the doctrine of equivalents is knowingly surrendered and everything else is unforeseeable at the time of this amendment by the Applicants and the attorneys.

The present application, after entry of this amendment, comprises twenty (20) claims, including seven (7) independent claims. Applicants have previously paid for twenty (20) claims including seven (7) independent claims. Applicants, therefore, believe that an additional fee for claims amendment is currently not due.

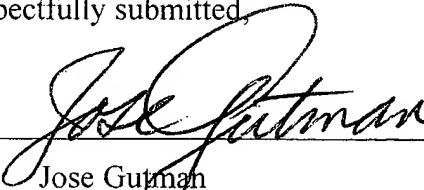
**If the Examiner believes that there are any informalities that can be corrected by Examiner's amendment, or that in any way it would help expedite the prosecution of the patent application, a telephone call to the undersigned at (561) 989-9811 is respectfully solicited.**

The Commissioner is hereby authorized to charge any fees that may be required or credit any overpayment to Deposit Account 50-1556.

In view of the preceding discussion, it is submitted that the claims are in condition for allowance. Reconsideration and re-examination is requested.

Respectfully submitted,

Date: 3/10/05

By:   
Jose Gutman  
Reg. No. 35,171

FLEIT, KAIN, GIBBONS, GUTMAN  
BONGINI & BIANCO P.L.  
551 N.W. 77th Street, Suite 111  
Boca Raton, FL 33487  
Tel (561) 989-9811 Fax (561) 989-9812